

## **45th Biennial Convention (16-20 November 2019)**

### **Promoting Physical Activity Among Church Attending African Americans With Chronic Health Conditions**

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#### **Purpose:**

The purpose of this study was to examine if the use of physical activity trackers within the African American (AA) church setting would increase physical activity (specifically walking) by parishioners with chronic diseases and to promote utilization of community health workers (CHWs) within the church in learning how to assist parishioners with chronic diseases. This study was designed to provide insight into the feasibility of CHWs within faith-based organizations (FBO) or churches to address chronic health issues. Additionally, this study aimed to determine if the presence of CHWs (utilized as peer coaches) would improve physical activity, and to determine if increased physical activity (measured with an activity tracker) would make a difference in systolic blood pressure and blood glucose levels.

#### **Methods:**

This quasi-experimental, feasibility study recruited participants from two churches that had homogenous congregations,  $n=31$ . Participants from both churches received education sessions on walking guidelines, safety, injury prevention and how to use the activity tracker. This was taught by a kinesiologist who was a part of the research team. Participants were randomized based on their church. One church was randomized as the intervention group and the other as the control group. The participants in the intervention group utilized CHWs to lead group walks whereas those in the control group were simply encouraged to accrue at least 8,000 to 10,000 steps per day per person. Blood pressure, finger-stick blood glucose levels and activity tracker data (number of steps) were collected at the beginning of the study, midway the study (2.5 weeks) and the end of the study (5 weeks). Walking groups were expected to meet a minimum of twice per week for 30 minutes each time, with a suggestion of three times per week. Participants that completed all components of the study received a \$25 VISA gift card and were allowed to keep their activity tracker. Total free-living ambulatory physical activity was assessed objectively using a consumer-wearable activity tracker and reported in average weekly steps/day. Days with fewer than 500 steps were excluded from the analysis for non-wear. Potential changes in physical activity in both churches were assessed using two-way (Group $\times$ Time) repeated measures analysis of variance. Data are presented as mean  $\pm$  standard deviation unless otherwise indicated.

#### **Results:**

All participants identified as either African-American or Black. The majority of participants ranged in age from 50–69 years of age. Overall, 74.29% were female and 25.71% were male. All participants had a diagnosis of either hypertension, diabetes, or both. Baseline physical activity was assessed continuously for  $22.0\pm 9.1$  days (range 7-31 days). Approximately 39% of participants accumulated fewer than 10,000 steps/day

at baseline. Total physical activity ranged from 3,800.4 to 19,822.6 steps/day (10,250.7±13,977.1 steps/day). No differences were observed when comparing the change in physical activity between churches (p=.540). When groups were collapsed, no change in physical activity was observed during the intervention during Week 1 (10,164.9±4,733.2 steps/week, p=.825), Week 2 (10,657.8±4,114.6 steps/week, p=.304) or Week 3 (10,014.6±3,694.4 steps/week, p=.707). Preliminary data also revealed that church A (with the peer coaches) started with group walking, but eventually decreased to only two groups of two, even though all participants did continue to walk on their own. Coordination of schedules was cited as the factor for the decline in the walking groups. Even though the walking groups declined, preliminary results showed that wearable activity trackers increased participants steps by 6%. Additionally, there was a 17.3% decrease in systolic blood pressures.

**Conclusion:**

The cost of chronic disease to the American healthcare system is estimated to be 86% of the nation's \$2.7 trillion healthcare budget (Center for Disease Control & Prevention [CDC], 2013). Furthermore, physical inactivity is a primary contributing cause of chronic disease (Nunan, Mahtani, Roberts, & Heneghan, 2013). National data posits that AAs engage in 48.9% less physical activity as compared to 38.2% of White Americans (Cohen et al., 2013). Chronic diseases affect AAs at a disproportionately higher rate than their White American counterparts (Arredondo, 2015). Literature indicates that participation in physical activity can slow the progression of chronic diseases such as high blood pressure and high blood glucose levels (Schulz et al., 2015). Faith-based organizations such as churches are important stakeholders in AA communities (both rural and urban) and are well positioned to address chronic disease. Many individuals with chronic illnesses are Medicaid recipients. Medicaid in the United States helps with medical costs for low-income individuals. However, there are many services not covered by Medicaid once these individuals are discharged home, creating a gap in care. Community health workers (CHWs) could bridge the gap between the managed care organization and the Medicaid patient. This study used peer walking coaches as CHWs with the intention of later utilizing CHWs to help individuals with chronic disease within the church. The findings from this study add to the evidence surrounding the need to promote physical activity in FBO as a strategy to help reduce cardiovascular risks such as hypertension and diabetes nationally, as well as globally.

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**Title:**

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**Keywords:**

Chronic Disease, Faith-based and Physical Activity

## References:

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## Abstract Summary:

Physical inactivity is a primary contributing cause of chronic disease. Chronic disease affects African Americans at a disproportionately higher rate than their Caucasian counterparts. Faith-based organizations such as churches are important stakeholders in African American communities. Using physical activity trackers in faith-based organizations can help to address chronic disease.

## Content Outline:

### I. Background

- A. Discuss cost of chronic disease
- B. Discuss major contributing factor to physical inactivity
- C. Discuss population affected: African-Americans affected a higher rate than Caucasians

### II: Purpose/Aims

- A. Discuss the aims and hypotheses of the study

### III. Methods

- A. Discuss recruitment and consent process
- B. Discuss data collection process

### IV. Results/Implications

- A. Discuss sample and demographic characteristics
- B. Discuss study results
- V. Discussion and Implications
  - A. Discuss how the findings add to the evidence surrounding the need to continue to promote physical activity within faith-based organizations
  - B. Discuss recommendations for future research within faith-based organizations

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